

AMENDMENT TO THE CLAIMS:

Please cancel claims 1 and 3 without prejudice and please amend claims 2 and 4-11 as follows:

1. (Canceled).

2. (Currently Amended) Method for machining a surface of a bore having a central axis which is also an axis of rotation for a honing tool, the method comprising:

machining the bore with a honing tool through a first forward stroke and a first return stroke of the first tool, at a relatively lower axial speed and a relatively higher rotational speed such that machining tracks resulting from the machining are within five degrees of perpendicular to a central axis of the bore; and

machining the bore with the honing tool through a second forward stroke and a second return stroke in which the axial speed is increased and the rotational speed is decreased, such that crosscut tracks are produced at a greater angle from perpendicular than the machining tracks from the first forward stroke and first return stroke; and

wherein said crosscut tracks are made to a substantially same depth during the second forward stroke and the second return stroke.

~~Method according to claim 1, wherein during the first stroke the ratio of the stroke speed to the rotational speed of the tool is increased compared with the normal ratio for arbor honing.~~

3. (Canceled)

4. (Currently Amended) Method according to claim 1, wherein after retracting the tool from the bore on the second return stroke, the ratio of the stroke speed to the rotational speed of the tool is increased and the bore is re-machined with at least one more forward stroke and one more return stroke.

5. (Currently Amended) Method according to claim 1 2, wherein, prior to the ~~remachining~~ re-machining return stroke, the tool is reset to a smaller size.

6. (Currently Amended) Method according to claim 1 2, wherein during ~~remachining~~ re-machining ~~several~~ a plurality of forward and return strokes are performed.

7. (Currently Amended) Method according to claim 6, wherein, before or during ~~remachining~~ re-machining ~~with the higher speed~~, there is a honing tool infeed.

8. (Currently Amended) Method according to claim 1 2, wherein, following ~~onto the~~ remachining re-machining in which peaks are formed in the surface structure, the peaks of the surface structure are smoothed.

9. (Currently Amended) Method according to claim 8, wherein the smoothing of the peaks ~~takes place~~ is performed ~~with the aid of the same tool as used in the preceding re-~~ machining.

10. (Currently Amended) Method according to claim 8, wherein the smoothing of the peaks of the surface structure ~~takes place by using~~ is performed with a different tool than the tool used in the re-machining.

11. (Currently Amended) Method according to claim 1 2, wherein arbor honing comprises a maximum of three strokes and three return strokes.